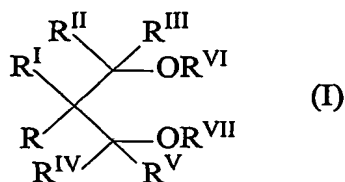


**CLAIMS**

1. Catalyst components for the polymerization of olefins comprising Mg, Ti, Cl, OR groups, where R is a C1-C10 alkyl group optionally containing heteroatoms, and an ether having two or more ether groups, characterized by the fact that the Mg/Ti weight ratio is lower than 3, the Cl/Ti weight ratio is from 1.5 to 6, the OR/Ti weight ratio is from 0.5 to 3.5 and at least 50% of the titanium atoms is in a valence state lower than 4.
2. The catalyst component according to claim 1 in which the ether having at least two ether groups is selected among 1,3 diethers of the formula (I):



wherein R, R<sup>I</sup>, R<sup>II</sup>, R<sup>III</sup>, R<sup>IV</sup> and R<sup>V</sup> equal or different to each other, are hydrogen or hydrocarbon radicals having from 1 to 18 carbon atoms, and R<sup>VI</sup> and R<sup>VII</sup>, equal or different from each other, have the same meaning of R-R<sup>V</sup> except that they cannot be hydrogen; one or more of the R-R<sup>VII</sup> groups can be linked to form a cycle.

3. The catalyst component according to claim 2 in which R<sup>VI</sup> and R<sup>VII</sup> are selected from C<sub>1</sub>-C<sub>4</sub> alkyl radicals.
4. The catalyst component according to claim 2 in which the radicals R<sup>II</sup>-R<sup>V</sup> are hydrogen the radicals R<sup>VI</sup> and R<sup>VII</sup> are C<sub>1</sub>-C<sub>4</sub> alkyl radicals and the radicals R and R<sup>I</sup>, same or different to each other, are C<sub>1</sub>-C<sub>18</sub> alkyl groups, C<sub>3</sub>-C<sub>18</sub> cycloalkyl groups, C<sub>6</sub>-C<sub>18</sub> aryl groups, or C<sub>7</sub>-C<sub>18</sub> alkylaryl or arylalkyl groups.
5. The catalyst component according to claim 4 in which R and R<sup>I</sup> are C<sub>1</sub>-C<sub>10</sub> linear or branched alkyls.
6. The catalyst component according to claim 1 in which the ether having at least two ether groups is a 1,2 diether.
7. The catalyst component according to claim 1 in which the Mg/Ti weight ratio is lower than 2, the Cl/Ti weight ratio is from 2 to 5.5, the OR/Ti weight ratio is from 0.7 to 3.
8. The catalyst component according to claim 1 in which at least 60% of the titanium atoms is in a valence state lower than 4.

9. The catalyst component according to claim 7 in which the Mg/Ti weight ratio is lower than 1.5, the Cl/Ti weight ratio is from 2.5 to 5, the OR/Ti weight ratio is from 0.7 to 2.5.
10. The catalyst component according to claim 8 in which at least 70% of the titanium atoms is in a valence state lower than 4.
11. Catalyst for the polymerization of olefins obtained by contacting (i) a catalyst component comprising Mg, Ti, Cl, OR groups, where R is a C1-C10 alkyl group optionally containing heteroatoms, and an ether having two or more ether groups, characterized by the fact that the Mg/Ti weight ratio is lower than 3 from 2 to 6.5 the Cl/Ti weight ratio is from 1.5 to 6, the OR/Ti weight ratio is from 0.5 to 3.5 and at least 50% of the titanium atoms is in a valence state lower than 4, with (b) an organoaluminum compound.
12. The catalyst according to claim 11 in which the organoaluminum compound is selected from trialkyl aluminum compounds.
13. The catalyst according to claim 11 in which the organoaluminum compound is selected from mixtures of trialkylaluminum's with alkylaluminum halides.
14. The catalyst according to claim 13 in which the alkylaluminum halide is selected among diethylaluminum chloride, diisobutylaluminum chloride, Al-sesquichloride and dimethylaluminum chloride.
15. Process for the (co)polymerization of olefins  $\text{CH}_2=\text{CHR}$ , where R is H or a C1-C12 hydrocarbon group, carried out in the presence of the catalyst according to anyone of the claims 11-14.
16. Process according to claim 15 in which the olefins copolymerized are ethylene and one or more alpha-olefins having from 3 to 12 carbon atoms.